

This Listing of Claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

Claims 1-17 (canceled)

18 (new): A process for protectively coating, against aggressive liquids, hydraulic microcircuits made in a resin, said process comprising:

a) providing a die comprising a silicon substrate covered by a plurality of metallic and dielectric layers, and also comprising a sacrificial metallic layer defining the inner shape of said hydraulic microcircuits;

b) depositing on an outer surface of said sacrificial metallic layer, in an electrochemical process, at least one metallic protective coating layer;

c) applying on said metallic protective coating layer an adhesion layer to promote the adhesion of a resin on said metallic protective coating layer;

d) depositing on said adhesion layer a non-photosensitive epoxy or polyamide resin, having a predetermined thickness and completely covering said sacrificial layer;

e) polymerizing said resin to increase its mechanical resistance to mechanical and thermal stresses; and

f) removing said sacrificial metallic layer via a chemical etching, by means of a highly acid bath.

19 (new): The process of claim 18, further comprising:

g) performing, after step e), a planarization of the outer surface of said resin; and

h) depositing, after step g), on the outer surface of said resin, in a vacuum evaporation operation, a protective layer.

20 (new): The process of claim 19, wherein step g) is performed through a mechanical lapping and simultaneous CMP type chemical treatment (Chemical-Mechanical-Polishing).

21 (new): The process of claim 18, wherein in step f) the highly acid bath is made of a mix of HCl and HNO₃ in a solution.

22 (new): The process of claim 18, wherein said process is a process for protectively coating an ejection chamber of an ink jet printhead, to reduce damaging effects of aggressive inks, and wherein:

in step a) an array of microcircuits for driving thermal elements for ejection of said ink is made in said plurality of metallic and dielectric layers, and said sacrificial metallic layer is provided with a cast for at least one ejection nozzle, said sacrificial metallic layer and said cast defining the inner shape of (1) a chamber of a feeding duct connected to said sacrificial metallic layer and (2) said at least one ejection nozzle; and

step d) of depositing said non-photosensitive epoxy or polyamide resin is performed so as to completely cover said sacrificial layer, including the cast of the nozzle.

23 (new): The process of claim 18, wherein said metallic coating layer is a metal selected from the group consisting of nickel-gold, palladium-gold, and ruthenium.

24 (new): The process of claim 18, wherein said protective layer is selected from the group consisting of a noble metal, magnesium fluoride and oxygen ($\text{MgF}_2 + \text{O}_2$), and silica and chromium ($\text{SiO}_2 + \text{Cr}$).

25 (new): An ink jet printhead, made of a silicon substrate and a plurality of metallic and dielectric layers deposited on said substrate, wherein a plurality of chambers for the ejection of ink droplets and a plurality of corresponding feeding ducts, connected to said chambers, are produced in a structural layer made of non-photosensitive epoxy or polyamide resin, said chambers and said ducts being defined by at least one upper wall, said upper wall communicating with at least one nozzle for ejection of said ink droplets, wherein said upper wall and an inner wall of said nozzle are coated with at least one metallic coating layer, suitable for increasing the resistance of said walls to chemically aggressive liquids, in contact with said walls.

26 (new): The printhead of claim 25, wherein said upper wall communicates continuously with said inner wall of said nozzles.

27 (new): The printhead of claim 25, characterized in that said upper wall is defined by a concave surface.

28 (new): The printhead of claim 25, wherein said inner wall of the nozzles is defined by a truncated cone shaped surface having its greater base disposed towards said upper wall.

29 (new): The printhead of claim 25, wherein said metallic coating layer is selected from a group consisting of nickel and gold, palladium and gold, and ruthenium.